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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/561,278  | 12/15/2005  | Dieter Minninger     | 2003P00692WOUS      | 5659             |
| 22116 7590 04/28/2008<br>SIEMENS CORPORATION<br>INTELLECTUAL PROPERTY DEPARTMENT<br>170 WOOD AVENUE SOUTH<br>ISELIN, NJ 08830 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| HANAN, DEVIN J  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 3745  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/561,278

**Applicant(s)**

MINNINGER, DIETER

**Examiner**

DEVIN HANAN

**Art Unit**

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/15/2008 as an amendment.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 1/15/2008 have been fully considered but they are not persuasive. The applicant argues that the Kreis et al. reference does not teach of a speed sensor controlling the operation of a valve. The examiner agrees that no speed sensor is explicitly mentioned to control valves 19 and 20. Another reference that teaches of speed sensors in turbines was brought in to show that speed sensors are used in turbines to control operations. One such operation would be to control the valves 19 and 20 of the Kreis et al. reference. Additionally, applicant argues that Kreis et al. do not show the feed passage further on the inside than the outlet openings. The examiner agrees that Kreis et al. do not show the arrangement, but other cited patents, such as Davison et al., do show the arrangement.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites the limitation "actuating arrangement" in line 2. There is insufficient antecedent basis for this limitation in the claim. The limitation was removed from claim 12.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Davison et al. (U.S. Patent 4,893,984).

Davison et al. disclose a turbo machine comprising;

a rotor rotatably mounted in a casing of the turbo-machine;

a feed passage (fig 2, path from 56 to 60) arranged in the rotor for providing a fluid; and

a discharge passage (fig 3, between the roots of blades in the turbine section) arranged in the rotor for discharging the fluid;

wherein a feeding opening of the feed passage is radially further on the inside than an outlet opening of the discharge passage.

Regarding claim 13, as far as it is definite, Davison et al. disclose the actuating arrangement for influencing the fluid flow is connected to the discharge passage via a

gap formed between moving blade wheels and an element projecting axially through the rotor shaft.

Regarding claim 14, Davison et al. disclose the discharge passage has a throttling element (fig 2, 60).

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Kreis et al. (U.S. Patent 5,525,032).

Regarding claim 20, Kreis et al. discloses a method of heating a rotor of a turbomachine having a compressor comprising;

flowing a fluid for heating the rotor through the rotor during a start up operation carried out before the load operation of the turbomachine and preventing a fluid flow through the rotor during the load operation of the turbomachine (valves 19 and 20 are capable of controlling the flow of coolant through the rotor at any desired time or based on another input, the col. 1 lines 50-67).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davison in view of Caruso (6,382,903).

Davison et al. discloses all of the claimed limitations as discussed in the rejection of claim 12 above, but does not disclose the discharge passage opens into the flow passage of the turbo machine.

Caruso et al. teaches of feeding the discharge air into the flow passage (figure 4) for the purpose of cooling the rotor (col. 2 lines 27-34).

Since Davison et al. and Caruso et al. are both from the turbine with air cooling the rotor art, the purpose disclosed by Caruso et al. would have been recognized in the pertinent art of Davison et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to discharge the air to the flow passage to better cool the rotor. (col. 2 lines 27-34)

Regarding claim 16, the modified apparatus of Davison et al. disclose all the claimed limitations as discussed in the rejection of claim 15 above.

Regarding claim 17, the modified apparatus of Davison et al. disclose all the claimed limitations as discussed in the rejection of claim 15 above and disclose the feed is on the compressor side of the rotor shaft (the feed is upstream of the turbine stage).

Claims 18-19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreis in view of Goldberg (6,382,903).

Kreis et al. disclose a method of cooling at rotor of a turbomachine comprising;  
flowing a cooling flow through the rotor of the turbomachine during a rotary operation following a load operation of the turbomachine (col. 1 lines 50-60).

Kreis et al. do not disclose opening the feed passage with the speed of the rotor is below a value.

However, Goldberg et al. teach of using speed sensors (30) for the purpose of controlling a turbine (38-45).

Since Kreis et al. and Goldberg et al. are both from the turbine with sensors to control the operation, the purpose disclosed by Goldberg et al. would have been recognized in the pertinent art of Kreis et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use the speed sensors of Goldberg et al. to control the opening of the feed passage (valves 19 and 20) of Kreis et al. (col. 2 lines 27-34).

Regarding claim 19, the modified apparatus of Kreis et al. disclose all of the claimed limitations in claim 18 above and the fluid flow is prevented during the load operation (the valves can control the fluid flow during load operation).

Regarding claim 22, the modified apparatus of Kreis et al. disclose all of the claimed limitations in claim 18 above.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEVIN HANAN whose telephone number is (571)272-6089. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on 571-272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devin Hanan/  
Examiner, Art Unit 3745

/Edward K. Look/  
Supervisory Patent Examiner, Art Unit 3745